

**CALIFORNIA RESOURCES AGENCY  
COASTAL IMPACT ASSISTANCE PROGRAM  
PROJECT PROPOSAL FORM**

**County:** Ventura County  
**Department:** General Services Agency  
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**Title of project:** Energy Conservation – Installation of Photovoltaic “Net Metering”  
Systems at 23 Fire Stations  
**Project location:** Countywide  
**Total cost:** \$73,562  
**Funding request:** \$73,562

**MISSION**

*To ensure comprehensive and coordinated management, conservation and enhancement of California's ocean and coastal resources for their intrinsic value and for the benefit of current and future generations.*

**GOALS:** Four goals have been established by the State of California to achieve this mission.

**Goal 1: Stewardship.** To assess, conserve, and manage California's ocean and coastal resources and the ecosystem that supports those resources.

**Goal 2: Economic Sustainability.** To encourage environmentally sound, sustainable, and economically beneficial ocean and coastal resource development activities.

**Goal 3: Research, Education and Technology.** To advance research, educational programs, and technology developments to meet future needs and uses of coastal and ocean resources.

**Goal 4: Jurisdiction and Ownership.** To maximize California's interests in coastal watersheds, State Tidelands, the Territorial Sea, and the Exclusive Economic Zone.

## **Project Summary:**

An important aspect of regulating offshore oil and gas development, including offshore platforms and onshore facilities, transportation, and storage activities is conservation of non-renewable resources, such as oil and gas. County staff coordinate with other regulatory agencies such as the Minerals Management Service, California Coastal Commission, California State Lands Commission, and the State Division of Oil, Gas and Geothermal Resources in order to promote environmentally sound, sustainable, and economically beneficial ocean and coastal resource development. These issues are of key importance given California's current energy crisis.

To promote conservation and less dependence on oil and gas resources, the County requests \$73,652 to fund installation of photovoltaic (PV) systems at 23 Ventura County Fire District stations throughout Ventura County. Each system will be a "net metering" system. These systems are installed to interface with the utility (Southern California Edison) and essentially "run the meter backwards" from the solar-produced electricity during the day. If there is not enough self-generated power to meet the station's needs, the utility will provide the difference. At night, the utility will provide the needed electricity. No on-site battery storage will be used.

Major system components include:

- 16 PV panels with a total area of approximately 170 square feet
- 2000-watt dc-to ac inverter
- Mounting hardware
- Electrical safety components required by the local code enforcement agency and the Southern California Edison.

Based on a local solar data, each system will typically generate 12.2 kilowatt-hours (KWH) per day, or 4453 KWH per year.

## **Consistency with Mission and Goals:**

This program addresses Coastal Impact Assistance Program Goals 1, 2 and 3 by funding energy conservation and the use of renewable, sustainable technologies.

The project is responsive to Goal # 1 in that use of energy conservation and renewable, sustainable technologies will conserve and help manage California's ocean and coastal resources, specifically offshore oil and gas. It also addresses Goal #2, encouraging environmentally sound, sustainable, and economically beneficial ocean and coastal resource development activities, in that conservation of oil and gas resources promotes sound environmental practices and the sustainability of California's coastal and oceanic resources. Specifically, this project will fund the use of energy technologies (photovoltaic) that have no adverse effects on California's coast. Finally, the project addresses Goal #3 because it would advance energy conservation and sustainable technologies, both of which will help meet future management of our offshore energy resources.

This project is modest yet will be important in helping solve California's on-going electrical supply shortage. By generating power during the middle of the day, the PV systems will offset demand during the most critical time of the day. When power is more plentiful at night, electricity will be delivered by the utility. Doing away with on-site battery storage has three major benefits. First, the initial system cost is reduced by 30-50%. Second, the cost associated with battery maintenance is avoided. Third, and of great importance, batteries have a limited life and need to be treated as hazardous waste for disposal purposes. Typical batteries have significant amounts of either lead or cadmium, both of which are hazardous and toxic.

Each watt of electricity generated by renewable systems lessens the need for and reliance on fossil fuel sources, such as those derived from coastal natural gas and oil development.

There are two economic benefits from this project. First, the 23 proposed systems will produce over 100,000kWh of electricity annually. The savings to local government (at a projected cost of \$0.20/kWh) will be in excess of \$20,000 per year. Second, the purchase of these systems will contribute to the economic viability of the growing but still small renewable energy industry. A number of renewable energy companies are located within Ventura.

#### **Estimated Project Budget:**

Each 2-kW PV system will have an installed cost of \$12,500, or a total \$287,500. The California energy Commission is offering a rebate of \$3.00/perwatt for PV systems. At a rated capacity of 1920 watts for each system will receive a rebate of \$5,760 or \$132,480 for all 23 systems. This will bring the after-rebate cost down to \$155,020. The County will provide a match of \$81,458 for this project.

<b>Line Item</b>	<b>Estimated Expense</b>
Twenty three (23) 2-kW Photovoltaic system (CIAP Funds)	\$73,562
County Match	\$81,458
<b>Total</b>	<b>\$155,020</b>

#### **Anticipated Project Schedule:**

We anticipate this project to last 1 year, commencing upon receipt of Coastal Impacts Assistance funds or authorization to commence the project, whichever occurs sooner.